

**Methodology and Assumptions for the
2012 National Projections**

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Introduction

The U.S. Census Bureau periodically produces projections of the United States resident population by age, sex, race, and Hispanic origin. These projections are produced using a cohort-component method and are based on assumptions about demographic components of change (future births, deaths, and net international migration). This document presents the methodology and assumptions used to produce the 2012 National Projections – the first based on the 2010 Census – for 2012 through 2060.

Methods

The projections were produced using a cohort-component method beginning with an estimated base population for July 1, 2011.¹ First, components of population change (mortality, fertility, and net international migration) were projected. Next, for each passing year, the population is advanced one year of age and the new age categories are updated using the projected survival rates and levels of net international migration for that year. A new birth cohort is then added to form the population under one year of age by applying projected age-specific fertility rates to the average female population aged 10 to 54 years and updating the new cohort for the effects of mortality and net international migration.

The assumptions for the components of change are based on time series analysis of historical trends. This section provides details about the methods used to project fertility rates, mortality rates, and future levels of net international migration.

Fertility

Only one series of fertility rates was projected for the 2012 National Projections. Age-specific fertility rates were calculated and projected for women aged 10 to 54 years from birth registration data for 1989 to 2009, which are compiled by the National Center for Health Statistics (NCHS). Births to non-resident women were excluded from the time series.²

The birth registration data were used in conjunction with the Census Bureau's Intercensal Estimates to produce a series of age-specific fertility rates by race and Hispanic origin of mothers (U.S. Census Bureau, 2011). These data include four categories of race for the mother – White, Black, American Indian or Alaska Native, and Asian or Pacific Islander – and two categories for Hispanic origin – Hispanic and Not Hispanic. The intercensal estimates were only available by the four races prior to 2000. For the period from 2000 to 2009, the intercensal estimates were produced for a total of 31 race groups consistent with the revised Office of Management and Budget (OMB) standards for data on race and ethnicity (Office of Management and Budget, 1997). To maintain continuity of the estimates across the time series, bridged race intercensal estimates were used for 2000 to 2009.³

¹ The base population derives from the Census Bureau's Vintage 2011 Population Estimates, which are based on the 2010 Census (U.S. Census Bureau, 2012a).

² Non-resident women are defined as women whose state of residence is *not* one of the 50 states or the District of Columbia.

³ Bridged race estimates are those where multiple-race responses are converted back to the single-race categories consistent with the 1977 Office of Management and Budget standards for data on race and ethnicity.

For the purposes of these projections, rates were produced for five race and Hispanic origin groups: (1) non-Hispanic White, (2) non-Hispanic Black, (3) non-Hispanic American Indian or Alaska Native (AIAN), (4) non-Hispanic Asian or Pacific Islander (API), and (5) Hispanic (of any race).

Assigning Race, Hispanic Origin, and Sex to Projected Births

Race and Hispanic origin was assigned to projected births based on the race of the mother, the racial composition of men in the projected population, and the 2010 Census distribution of race and ethnicity of women and men with children less than 18 years of age in the household.

To produce population estimates, information on the mother and father from each birth record is used to determine the race and Hispanic origin of the child. Race and Hispanic origin is assigned to each birth based on distributions of race reporting by parents of children aged 0 to 17 years from census data. This method and the underlying data have been described in previous work in population estimates and projections (e.g., Hollmann and Kingkade 2005, Smith and Jones 2003, U.S. Census Bureau 2010). The current application of this method is referred to as the Kid Link Method.

The Kid Link Method uses information on the relationship to the householder to define children as natural-born sons and daughters of the householder and parents as persons who are the householder, spouse of the householder, or unmarried partner of the householder. Records are kept where there is only one parent in the household. Records with same-sex parents are dropped since the intent is to provide a comparable measure to the parents' records on the birth certificate and compare the relationship between biological parents' race and Hispanic origin with the race and Hispanic origin reported for children.

The distributions of race and Hispanic origin for children aged 0 to 17 years are derived from a series of cross-tabulations of the reported race of the child for every race and Hispanic origin combination of parents. The result is a series of child race and Hispanic origin proportions for every combination of parents' race and Hispanic origin, which we refer to as Kid Link Proportions. Race and Hispanic origin are then assigned to births by multiplying the births by the respective child race proportions for that parental race-origin combination. Further documentation and additional applications of the Kid Link Method are discussed elsewhere (Guarneri and Dick 2012).

A comparable approach is adopted to assign race and Hispanic origin to projected births. The method for allocating births by race and Hispanic origin must be modified somewhat because births are projected by the race and Hispanic origin of the mother, but do not include information on the race and Hispanic origin of the father. To address this limitation, a pool of potential fathers is created from the projected male population based on the race and Hispanic origin composition of fathers relative to that of the entire male population in the 2010 Census.

The potential fathers are linked to mothers by age – each age of mother category has a specified age range for potential fathers based on 2010 Census data. The age range is generated by calculating the mean age of fathers for mothers from the census data, then adding and subtracting one standard deviation from the mean age to create the age range for each age of mother category. Once prospective fathers are linked to the mothers, race and Hispanic origin are assigned to each birth using the Kid Link proportions. Since the Kid Link proportions remain constant for all projected years, changes in the racial and Hispanic origin composition of the mothers and fathers will drive changes in the racial and Hispanic origin composition of births over time.

Sex was assigned to projected births within each race and Hispanic origin group. The sex ratios (males per 100 females) of future births was set to equal the average of the sex ratios of births for the period from 1989 to 2009, within each of the five race and Hispanic origin groups.

Fertility Projections

To project fertility, basic methods of convergence by means of linear interpolation to the average age-specific fertility rates of the non-Hispanic White group were considered. For the 2012 National Projections, age-specific fertility rates were projected to 2060 by assuming convergence by 2100 of the age-specific fertility rates of all five race and Hispanic origin groups to the average age-specific fertility rates of the non-Hispanic White group for the years 1989-2009 (1.83 births per woman).

Results

Table 1 presents the total fertility rates by race and Hispanic origin for 2012 to 2060.⁴ The fertility rates for the non-Hispanic White group are projected to remain constant, below replacement level.⁵ Those for the non-Hispanic Black group are projected to fall below replacement level. The rate for the non-Hispanic AIAN group is projected to fall just below replacement level at 2.01. The rate for the non-Hispanic API group remains below replacement level. The Hispanic fertility rate is projected to decline to 2.15 – just above replacement level.

Figures 1 and 2 show the age-specific fertility rates for each of the five race-Hispanic origin groups in 2009 and 2060, respectively. As expected, the age distribution of the fertility rates for all groups become more in line with the age distribution of rates for non-Hispanic White females. Rates for non-Hispanic Blacks, non-Hispanic AIAN, and Hispanics remain slightly higher in the young adult ages compared to rates for the non-Hispanic White and non-Hispanic API.

Mortality

Only one series of mortality rates was projected for the 2012 National Projections. Mortality rates were calculated from NCHS-compiled death registration data for 1989 to 2009, and they were also used in conjunction with the Population Estimates Program's Intercensal Estimates to produce a series of mortality rates by age and sex for three race and Hispanic origin groupings (U.S. Census Bureau, 2011). Death data include four categories of race – White, Black, American Indian or Alaska Native, and Asian or Pacific Islander – and two categories for Hispanic origin – Hispanic and Not Hispanic. The intercensal estimates are available by four races prior to 2000. For the period from 2000 to 2009, the intercensal estimates were produced for a total of 31 race groups consistent with the revised OMB standards for data on race and ethnicity (Office of Management and Budget, 1997). To maintain continuity of the estimates across the time series, we use the bridged race intercensal estimates for 2000 to 2009. Deaths to non-residents were excluded from the series.⁶

Due to concerns about the quality of race reporting in the death data over the time series, the non-Hispanic race groups were collapsed into two categories. Groups with similar mortality patterns were combined. As a result, mortality rates were produced for three race and Hispanic origin groups: (1) non-Hispanic White and Asian or Pacific Islander (API), (2) non-Hispanic Black and American Indian or Alaska Native (AIAN), and (3) Hispanic (of any race).

⁴ The projected age-specific fertility rates by the five race and Hispanic origin groupings are provided in Technical Appendix 1:

<http://www.census.gov/population/projections/data/national/2012/2012methodology.html>.

⁵ Replacement fertility is considered to be about 2.1 births per woman.

⁶ Non-residents are defined as persons whose reported state of residence is *not* one of the 50 states or the District of Columbia.

Mortality Projections

Mortality was projected based on projections of the life expectancy at birth (e_0) by sex. Changes in life expectancy by sex were modeled assuming that the complement of the life expectancy (difference between an upper bound value, A , and life expectancy values) would decline exponentially.

Thus,

$$C(t) = A - e_0(t) \quad [1]$$

Where: $C(t)$ = The observed complement of life expectancy at birth at time t

A = The upper asymptote of life expectancy

$e_0(t)$ = The life expectancy at birth at time t

The complement of life expectancy was then projected for future dates as:

$$\hat{C}(t) = \hat{C}(t_0)e^{r(t-t_0)} \quad [2]$$

Where: $\hat{C}(t)$ = The observed complement of life expectancy at birth at time t

r = The rate of change in the complement of life expectancy at birth

$\hat{C}(t_0)$ = The model complement of life expectancy at time t_0

The parameters r , $\hat{C}(t_0)$, and A were estimated simultaneously by minimizing the sum of squared errors (SSE) between the model and the observed values of life expectancy, by sex, for the years 1999 through 2009.⁷

The same rate of change in the complement of life expectancy for each of the three race and Hispanic origin groups was assumed as for the total country for each sex. Projected values for the complement of life expectancy for each group for selected years from 2010 through 2060 were produced using the Census Bureau's subnational toolkit workbook, which is a planned addition to the Census Bureau's Population Analysis System (U.S. Census Bureau, forthcoming). This workbook assumes that the rate of change in the complement of e_0 is the same for each subpopulation as it is for the total country.

Mortality rates by age were then produced using the most recent observed rates by sex and race-origin group, the trajectory of life expectancy values, and an ultimate life table. To get an ultimate age pattern of mortality by sex, the United Nations' single age versions of the extended Coale and Demeny model life tables were used (United Nations 2010, United Nations 2012). The West model mortality rates with life expectancy values of 87 for males and 91 for females were selected.

Using the Coale-Demeny West model, age-specific central death rates were projected for each of the three race-origin groups by sex using the Census Bureau's Rural-Urban Projection (RUP) program. The RUP algorithm creates life tables for years that have intermediate life expectancy estimates by finding the interpolation factors for the most recent and next death rate inputs that would result in the desired life expectancy at birth value (Arriaga and Associates, 2003). The interpolation is done on the logarithms of the death rate values.

⁷ These calculations were performed using Microsoft Excel's "Solver" add-in tool.

While the difference in life expectancy between Hispanics and non-Hispanics is projected to grow smaller over time, the projected life expectancy at birth for Hispanic males and females remains higher in all years than for the other two groups. We question whether the differential in life expectancy for the observed years is real or an artifact produced by issues in the underlying mortality and population data used to produce the measure. This issue will lead to further research in subsequent years, but for the purposes of producing the 2012 National Projections, the projections of life expectancy for the Hispanic population were modified by assuming they would converge to the life expectancy of the non-Hispanic White and API group in 2035. From 2035 through 2060, the Hispanic group is given the same projected life expectancy as the non-Hispanic White and API group.

Results

Table 2 presents estimates and projections of life expectancy at birth and at age 65 for 2010 through 2060.⁸ Life expectancy at birth is projected to increase for all groups. The increase in life expectancy is largest for the non-Hispanic Black and AIAN category. Between 2010 and 2060, life expectancy for this group is projected to increase from 71.2 years to 80.4 years for males and increase from 77.6 years to 84.7 years for females. The second largest increase is for the non-Hispanic White and API category, increasing from 76.8 years to 83.2 years for males and increasing from 81.5 years to 87.2 years for females. Life expectancy for Hispanic males is projected to increase from 78.8 years in 2010 to 83.2 years in 2060. Hispanic females are projected to increase from 83.7 years in 2010 to 87.2 years in 2060.

Figure 3 shows the mortality rates by age for the three race and Hispanic origin groups by sex in 2009. Rates are highest for non-Hispanic Black and AIAN and lower for all others. Figure 4 presents the projected mortality rates for the same groups in 2060. While rates decrease for several ages, the overall patterns are projected to remain the same. Rates are highest for the non-Hispanic Black and AIAN group. Rates for the non-Hispanic White and API and Hispanic groups are the same, since Hispanic life expectancy at birth and mortality rates were assumed to converge on the non-Hispanic White and API rates in 2035.

Net International Migration

Only one series of net international migration (NIM) projections were developed for the 2012 National Projections. Assumptions for alternative levels of net international migration, representing high, low, and constant levels of net international migration relative to the 2012 series, are under development and planned for release in 2013.

The projections of net international migration for the 2012 National Projections consist of three components:

1. Foreign-born immigration
2. Foreign-born emigration
3. Net native-born migration

Foreign-Born Immigration

Projections of foreign-born immigration were based on rates of emigration from sending countries. This approach shifts the perspective to the source countries by incorporating information on the trends in population in sending countries. Rates of emigration were calculated from annual

⁸ The projected input life expectancies at birth, mortality rates, and survival ratios by the three race and Hispanic origin groupings are provided in Technical Appendices 2 through 4:
<http://www.census.gov/population/projections/data/national/2012/2012methodology.html>.

estimates of foreign-born immigration and population estimates for the sending countries. Both sets of estimates are described below.

Estimates of Foreign-Born Immigration: 1980-2010

Estimates of foreign-born immigration were developed using data from the 1990 and 2000 censuses and the 2000-2010 single-year American Community Survey (ACS) data files. Using single-year ACS data, foreign-born immigration is measured as the foreign-born population who reported their year of entry to the United States as one year prior to the survey year. For example, if a foreign-born respondent in the 2009 ACS reported their year of entry as 2008, then that person would be counted in the 2008 estimate of foreign-born immigration.

Using the decennial census data to estimate immigration is more complex because the data are not collected on an annual basis, as the ACS is, but instead represent two time points that are ten years apart. In addition, because of the 10-year period, estimates of immigration must be adjusted to account for emigration and death. Census data do not include information on immigrants that emigrate or die before the census date. For instance, immigrants who entered the United States in 1994 and then emigrated in 1998 would not be included in the 2000 Census. Excluding those who emigrate before the census date would produce downwardly biased estimates of immigration.

To account for emigration during the decade, the year of entry estimates for each year were adjusted using emigration rates. First, foreign-born immigration was estimated for the years 1991 to 2000 using the foreign-born population in the 2000 Census who reported a year of entry between 1990 and 1999 by sex, race, and Hispanic origin. Next, each annual estimate was adjusted for emigration by applying an emigration rate of 1.44 to each year.⁹ The same method was applied to 1990 Census data to develop estimates of foreign-born immigration between 1980 and 1989. Deaths that occurred to the foreign born each year were estimated using the mortality rates produced for the years 1989 through 2000. Hispanic origin is missing in a substantial number of death records prior to 1989, which led to the decision to use data from 1989 forward to produce the time series of death estimates. For the same reason, mortality rates for 1989, based on more complete reporting of Hispanic origin in death records, were used to generate immigration estimates for 1980 through 1989. For all other years, 1990 through 2000, the mortality rates for that year are used.

Estimates and Projections of Population in Sending Countries: 1980-2060

The Census Bureau produces estimates and projections of populations in other countries, which are compiled into the International Data Base (IDB) and are available to the public on the Census Bureau's website (U.S. Census Bureau, 2012b). The IDB projections are available through 2050. To extend the series to 2060, we extrapolated the populations from 2050 to 2060 by assuming that the growth rates for that period would decline at the same rate as in the 2040 to 2050 period. The extrapolation was performed within country-of-birth groupings, which are described in the next section.

Country of Birth Groupings

The foreign-born immigration estimates and sending country population estimates and projections were categorized into four country-of-birth groupings:

⁹ The emigration rate of 1.44 is the emigration rate for recent arrivals (e.g., those entering within the past 10 years) used for the Vintage 2011 estimates of foreign-born emigration. Emigration rates for the 1980s were calculated by Ahmed and Robinson (1994), but they were calculated only for arrivals before 1980. Earlier arrival cohorts are expected to have a lower rate of emigration than the more recent arrivals for which we are producing estimates, so we chose to use more current data on the emigration of recent immigrants.

1. Europe, Central Asia, and the Middle East,
2. Asia and Pacific Islands,
3. Non-Spanish Caribbean and Sub-Saharan Africa, and
4. Spanish Caribbean and Latin America.

These groupings were devised to place migrants into categories that correspond to the race and Hispanic origin groups for which the population projections are produced. The race and Hispanic origin distributions that were used to determine the race and Hispanic origin categorization of the foreign-born immigrants in each of the four country-of-birth groupings were derived from 2006-2010 ACS data.

Table 3 provides information about the race and Hispanic origin of foreign-born immigrants based on data from the 2006-2010 ACS. Cells highlighted in green indicate the largest Hispanic origin group within the country of birth grouping while cells highlighted in blue indicate which race group is the largest within the country of birth grouping. According to the ACS data, 88.7 percent of the Europe, Central Asia, and the Middle East region are non-Hispanic White alone, 95.6 percent of the Asia and Pacific Islands region are non-Hispanic Asian alone, 90.7 percent of the non-Spanish Caribbean and Sub-Saharan Africa region are non-Hispanic Black alone, and 93.5 percent of the Spanish Caribbean and Latin America region are Hispanic. The projected foreign-born immigrants within each of these country-of-birth groupings are distributed based on the distribution of race and Hispanic origin within the group from the 2006-2010 ACS data. For example, when race and Hispanic origin are assigned to immigrants from the Europe, Central Asia, and the Middle East region, 88.7 percent are assigned as non-Hispanic White alone, 1.4 percent as non-Hispanic Black alone, etc. When race and Hispanic origin are assigned to immigrants from the Non-Spanish Caribbean and Sub-Saharan Africa region, 5.7 percent are assigned as non-Hispanic White alone, 90.7 percent as non-Hispanic Black alone, etc.

Estimates and projections of the population for each country-of-birth grouping are presented in Figure 5. Asia remains the region with the largest population, reaching over 4 billion in 2060. The Non-Spanish Caribbean and Sub-Saharan Africa region is projected to have the second highest population, exceeding the level for the Europe, Central Asia, and the Middle East region by 2060. Spanish Caribbean and Latin America region are projected to have a population of 723 million in 2060.

The exponential growth rate for each grouping is presented in Figure 6. The rate of growth is projected to decline in all regions, with the rate for the Non-Spanish Caribbean and Sub-Saharan Africa region remaining the highest overall. The rates for Europe, Central Asia, and the Middle East are projected to be nearly zero by 2060 and the rates for Asia and Pacific Islands and for the Spanish Caribbean and Latin America are projected to fall just below zero.

Emigration Rates from Sending Countries (to the United States)

Emigration rates for each of the four country-of-birth groupings were calculated by dividing the number of immigrants to the United States by the estimated population in that grouping. Rates were produced for the years 1980 through 2010 using this method. The emigration rates were projected into the future by assuming the current rates will move toward an ultimate rate that can be thought of simplistically as a weighted average of the observed rates. The model used to project the emigration rates from sending countries is specified as:

$$E'_{t+1} = E_t + a(E_t - U) \quad [3]$$

Where: E'_{t+1} = The model estimate for year t+1

- E_t = The observed data for year t (or the model value during projection)
- a = The recovery rate (pace at which the previous rate moves toward the ultimate value as a function of the distance from the ultimate)
- U = The ultimate level of the rate¹⁰

Estimated and projected rates of emigration for each sending country grouping are presented in Figure 7. Because future emigration rates are projected to stay constant over the long term, at around the average of the rates for the observed years, changes in the level of emigration from these countries to the United States in our projections are driven by the changes in population size within each sending region. Rates for the Spanish Caribbean and Latin America region have historically been the highest, therefore remain the highest in these projections at a rate of about 1.15 emigrants per 1,000 in the population. Rates for the other three region groupings are much lower, falling at just below 0.2 emigrants per 1,000 in the population.

Foreign-Born Immigration Projections

Projected immigrants to the United States were calculated for each year by multiplying the projected emigration rate from the sending countries by the projected population in the sending countries within each region. Figure 8 presents the projections of foreign-born immigration within each of the four country of birth groupings. The total number of foreign-born immigrants is projected to be almost 2 million in 2060. The largest number of immigrants in 2060, 833 thousand, is projected to come from Spanish Caribbean and Latin America. The second largest number of immigrants in 2060 is projected to come from Asia and the Pacific Islands, at a level of 475 thousand. The level of immigration from Africa and the Non-Spanish Caribbean is projected to be 360 thousand and the level from Europe, Central Asia, and the Middle East is projected to be 316 thousand.

The foreign-born immigration projections were distributed by age, sex, race, and Hispanic origin detail based on the distributions of characteristics of immigrants within each of the four country of birth groupings from the 2006-2010 ACS. These distributions were held constant in all years of the projections. Changes in composition result from changes in origin of the immigrants. Once the foreign-born immigrants were distributed by age, sex, race, and Hispanic origin, the projected total number of immigrants for 2011 was controlled to the level of foreign-born immigration estimated in the Vintage 2011 estimates. There were no modifications to the age, sex, race, or Hispanic origin distribution of the immigrants, only the total number of immigrants was adjusted. Linear interpolation was used to re-project the foreign-born immigrants from the controlled 2011 value to the original level projected for 2030.¹¹ The original results were retained for projections of the years 2030 through 2060.

Foreign-Born Emigration

Emigration of the foreign-born population from the United States was projected by first estimating a set of emigration rates and then applying those rates to the foreign-born population.

¹⁰ The model parameters a and U were calculated by the Microsoft Excel “Solver” add-in. The “Solver” tool simultaneously solves for a and U by minimizing the sum of squared errors between the model and observed emigration rates for each of the four country-of-birth groupings.

¹¹ Setting the point of convergence in 2030 rather than 2060 allows the projections to return to the trajectory of immigration consistent with the long-term trends in the time series.

Rates of Foreign-Born Emigration

Foreign-born emigration rates were estimated using a residual methodology. These rates were held constant for all projected years. The rates were produced and applied by arrival cohort, age, sex, and Hispanic origin. Rates were produced for three arrival cohorts: (1) immigrants who arrived in the past 0-9 years, (2) immigrants who arrived in the past 10-19 years, and (3) immigrants who arrived 20 or more years ago.

The residual rates were estimated using Census 2000 as the base population and the 2010 ACS as the target population. A residual estimate was calculated by adding half of the annual immigrants to the initial population, surviving that population forward to the next year, and then adding the other half of the immigrants and half of the immigrants for the next period.¹² This process was reiterated until the target population of July 1, 2010 was reached. The result was the expected population, from which the target population provided by the 2010 ACS is subtracted to provide a residual estimate of emigration. This estimate of foreign-born emigration was converted into a rate by dividing the annual estimate by the number of person years lived during the period. The rates were smoothed using penalized least squares. For the ages where the rates become negative, they are modeled using mathematical curves between the non-negative points.

Foreign-Born Emigration Projections

Foreign-born emigration was projected by applying the emigration rates to the foreign-born population. The same set of rates, by arrival cohort, age, sex, and Hispanic origin, were used for all projected years. For example, to estimate foreign-born emigration between 2010 and 2011, the emigration rates were applied to the foreign-born population from the 2010 ACS. To project foreign-born emigration between 2010 and 2011, the foreign-born population is projected for 2011 by aging the foreign-born population from the 2010 ACS forward one year, subtracting out deaths and emigrants, and adding the projected number of immigrants for that year.¹³ The residual rates are then applied to the projected foreign-born population for 2011. This process is repeated each year until 2060.

The total number of projected emigrants for 2011 was controlled to the level estimated in the Vintage 2011 estimates. Linear interpolation was used to re-project the foreign-born emigrants from the controlled 2011 value to the original level projected for 2030. The original results for projections were used for the years 2030 through 2060. The number of foreign-born emigrants is projected to increase from just over 281 thousand in 2011 to 753 thousand in 2060.

Net Native-Born Migration

The net international migration of the native-born population includes those emigrating out of the United States and those immigrating into the United States from Puerto Rico. The estimates of native-born and Puerto Rican migration from the Vintage 2011 estimates were held constant for all years in the projections. There were 24,745 migrants from Puerto Rico and 45,228 native-born migrants leaving the United States. The total net native-born migration for the 2012 National Projections is -20,483.

¹²Due to the continuous nature of migration, with migrants arriving throughout the year rather than all at one point in time, migrants are not at risk of dying for the full year. If we were to add in all of the immigrants at the beginning of the interval and survive them forward by subtracting out deaths to the group, we would overestimate the number of deaths for the immigrant arrivals in that year. Instead, we add half of the immigrants at the beginning of the period and survive them forward to the end of the interval by subtracting out deaths. We then add in the other half of the immigrants, which were not subjected to mortality.

¹³ Deaths are calculated using the projected survival ratios that are used to produce the population projections.

Net International Migration Projections

The projected net international migration of the foreign born was calculated by subtracting the foreign-born emigration projections from the foreign-born immigration projections. The immigration and emigration projections that were controlled to the Vintage 2011 estimates of the total number of immigrants and emigrants for 2011 were used for this calculation. The projections of net international migration were created by adding together the net foreign-born migrants and net native-born migrants.

Figure 9 presents the projections of net international migration by race and Hispanic origin from 2012 to 2060. The distribution of the net migrants follows closely the trends seen for foreign-born immigration. Hispanics are the largest group of net international migrants, increasing to just fewer than half a million net migrants in 2060. Non-Hispanic Asians are the next largest group, projected to increase to a net level of 293 thousand in 2060. Non-Hispanic Black migrants are projected to overtake non-Hispanic Whites, reaching a level of 227 thousand net international migrants in 2060 compared to 189 thousand for non-Hispanic Whites. The remaining 12 thousand migrants are non-Hispanic other races.

Table 4 shows the distribution and sex ratios of net international migration by race and Hispanic origin from 2012 to 2060. The percentage of net international migrants that is projected to be non-Hispanic White remains stable at around 15.6 percent. The percent non-Hispanic Black is projected to increase from 10.1 percent in 2012 to 18.6 percent in 2060, while the percent non-Hispanic Asian is projected to decrease from 33.2 percent in 2011 to 24.1 percent in 2060. Hispanics are projected to remain stable, accounting for 40 percent of net international migrants. The sex ratios, which reflect the projected number of males per 100 females, indicate that Hispanic net international migration is projected to be predominantly male, while there are slightly more females than males for all of the non-Hispanic groups.

Population Projections

The projected fertility rates, mortality rates, and future level of net international migration were used to generate projections of the U.S. resident population as well as projections of births and deaths for the years 2012 through 2060. This section presents highlights of the results. Results from the 2008 National Projections are included for purposes of comparison. Additional summary tables and detailed downloadable files with data for the 2012 National Projections are available on the Census Bureau's website: <<http://www.census.gov/population/projections>>.

Table 5 presents the projections of the resident population for 2012 through 2060. The population is projected to increase from 314 million in 2012 to 420 million in 2060. The projected populations from the 2012 National Projections are lower compared to the projections from the 2008 series. The difference between series was around 2.2 million in 2012 and increased to a difference of 39.2 million in 2050. Most of the difference is explained by decreases in the level of net international migration in the 2012 series compared to the 2008 series, though growing differences in the projected level of natural increase also contribute to these differences.

Trends in population growth are shown in Table 6. In the early years of the projections, the population is projected to increase by around 2.4 to 2.5 million each year. Around 2030 – the year in which the net international migration projections converge on the original projected level of migration – the pace of growth begins to slow. The annual numeric change in population decreases to around 2 million over the 2030s and dips just below 2 million in the 2050s. In the final decade of the projections, the numeric change in population is projected to increase to just around 2 million each year. The level of numeric change is notably lower than the level projected for the 2008 series.

In the projections released in 2008, the population was projected to increase at around 3 million a year in 2012, which would increase to 3.4 million in 2050.

The annual percent change in population is projected to be around 0.78 percent in 2012 and falls gradually over the projection period to 0.5 percent in 2046 (see Table 6). In contrast, the 2008 series projected a growth rate of 0.97 percent for 2012, which was projected to decrease to 0.79 percent in 2044. The 2012 National Projections, which are based on assumptions of lower fertility and a lower level of net international migration, suggest that the pace of growth will be much more moderate in the coming years.

Table 7 presents the projected total number of births and deaths by year. The number of births is projected to be around 4.2 million in 2012 and is projected to increase to just fewer than 5 million births per year in 2060. The projected births in the 2012 series are lower than what was projected in the 2008 series. In the 2008 series, births were projected to be around 4.3 million in 2012 and increase to just fewer than 5.7 million in 2050. Fertility assumptions for the 2008 National Projections were based on a time series of birth data ending in 2003. After 2007, the annual number of births in the United States began to decrease. The time series of data used to project fertility rates for the 2012 National Projections incorporates this decline and projects an overall lower level of fertility relative to the 2008 series. The number of deaths is projected to increase from around 2.5 million in 2012 to just over 4 million in 2060. The projected number of deaths in the 2012 series is slightly lower than the 2008 series.

The projections of natural increase, calculated as the number of births minus the number of deaths for a given year, are provided in Table 8. Decreases in the projected number of births led to declines in the level of natural increase over time. As a result, the level of natural increase in the 2012 series is lower than what was projected in the 2008 series. Natural increase for the 2012 National Projections is projected to be just fewer than 1.7 million in 2012 and decrease to 891 thousand per year in 2060. The level of natural increase is projected to drop below one million in 2036. This is notable, since the projected level of natural increase did not fall below 1.3 million in the 2008 series.

Table 8 also presents the projections of net international migration. As in the case of natural increase, the projections of net international migration are markedly lower in the 2012 series as compared to the 2008 series. For the 2012 series, net international migration is projected to be 725 thousand in 2012, which increases to 1.2 million migrants per year in 2060. In contrast, the 2008 series projected net international migration to be around 1.3 million in 2012 and to reach 2 million migrants per year by 2048. Net international migration is projected to overtake natural increase as the driver of population growth for the United States in 2032 (see Figure 10). This was projected to occur in 2027 in the 2008 National Projections.

Projections of the percent non-Hispanic White alone are presented in Table 9. In the 2008 National Projections, the non-Hispanic White population was projected to become the numerical minority in 2042. The timing of this “majority-minority crossover” is projected to occur in 2043 in the 2012 National Projections.

The distribution of the projected population by age and sex is shown in Figure 11. Projections for 2012 are represented by the red bars, blue represents the projections for 2035, and black represents the projections for 2060. One notable feature is the growth of the older ages over time.

As the baby boom generation ages forward, the population in the older ages is projected to increase substantially.¹⁴

Dependency ratios provide an alternative way to examine changes in the age structure of the population by providing an indicator of the potential burden on those in the working-age population. Figure 12 presents the projections of the youth, old-age, and total dependency ratios. The ratios represent the number of dependents, in the youngest and oldest age groups, relative to the size of the working-age population. Here, the working-age population is defined as those aged 18 to 64 years. Overall, the total dependency ratio is projected to increase from 59.5 in 2012 to 75.9 in 2060. Most of the increase is attributable to the increase in the old-age dependency ratios, represented by the red bars in this figure. An interesting artifact of the current projections is that the dependency ratio is projected to reach 75 by 2032, and then decrease to 73.6 by 2044 before increasing to 75.9 by 2060.

The distribution of the projected population by race and Hispanic origin is provided in Figure 13. As noted previously, the percent non-Hispanic White is projected to decrease from 63 percent in 2012 to 42 percent in 2060. The percent non-Hispanic Black is projected to increase slightly, from 12.3 percent in 2012 to 13.2 percent in 2060. The percent of the population that is non-Hispanic Asian is projected to grow from just fewer than 5 percent in 2012 to almost 8 percent by 2060. The percent non-Hispanic AIAN is projected to stay at around 0.7 percent while the percent non-Hispanic NHPI is projected to increase slightly from 0.17 percent to 0.23 percent. The non-Hispanic Two or More Races population is projected to increase from just fewer than 2 percent in 2012 to 4.8 percent in 2060. The Hispanic population is projected to increase from just fewer than 17 percent in 2012 to nearly 31 percent in 2060.

¹⁴ The baby boom generation includes those born between 1946 and 1964, which includes the population between the ages of 48 and 66 years in 2012. The baby boom generation will be between the ages of 71 and 89 years in 2035. By 2060, the baby boom generation will be aged 96 years and over.

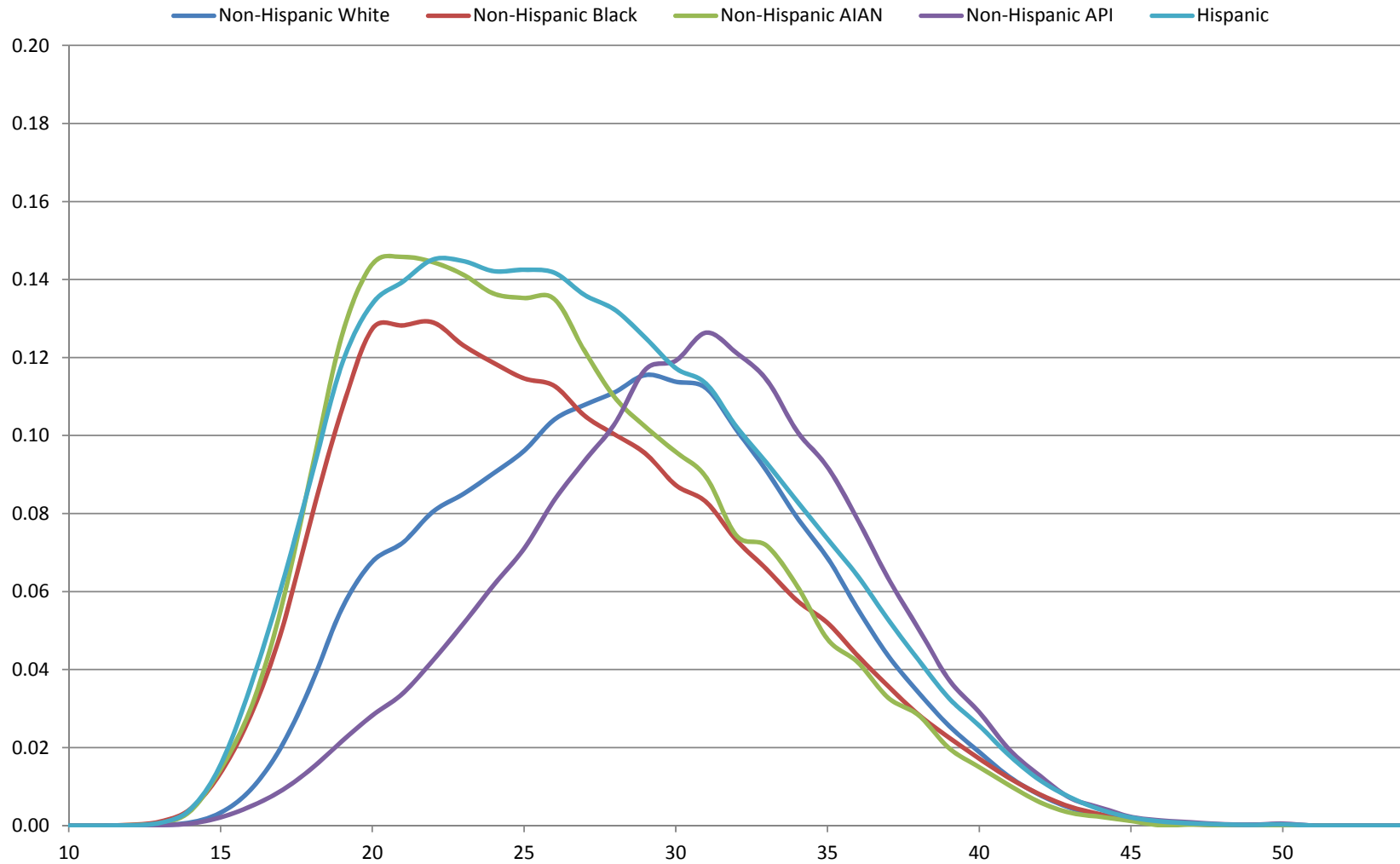
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Tables and Figures

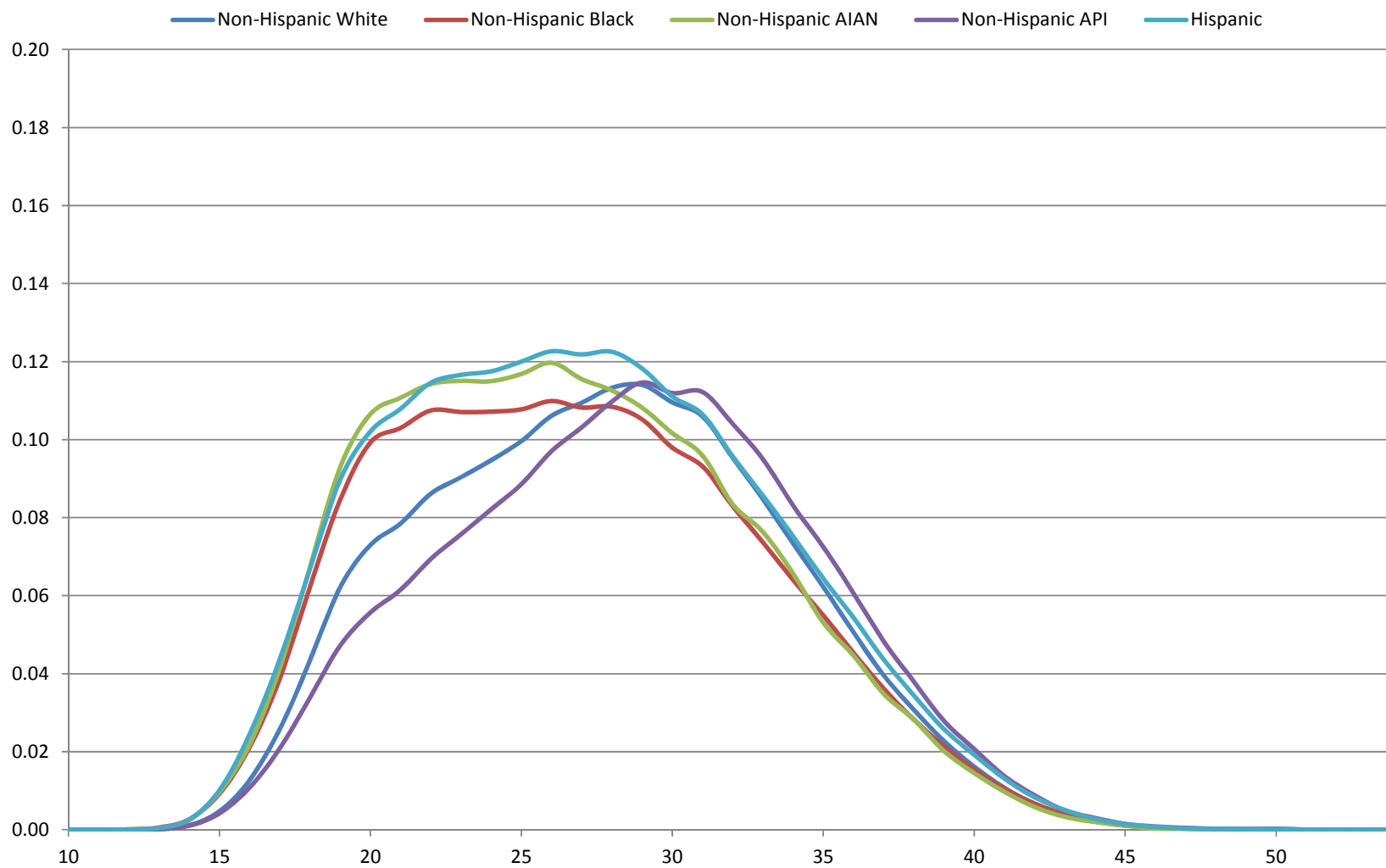
Table 1. Total Fertility Rates by Race and Hispanic Origin: 2012-2060						
Year	Total	Non-Hispanic				Hispanic
		White	Black	American Indian and Alaska Native	Asian and Pacific Islander	
2012	2.00	1.83	2.03	2.23	1.72	2.53
2013	1.99	1.83	2.03	2.22	1.73	2.52
2014	1.99	1.83	2.02	2.22	1.73	2.51
2015	1.99	1.83	2.02	2.21	1.73	2.51
2016	1.99	1.83	2.02	2.21	1.73	2.50
2017	1.99	1.83	2.02	2.20	1.73	2.49
2018	1.99	1.83	2.01	2.20	1.73	2.48
2019	1.98	1.83	2.01	2.19	1.73	2.47
2020	1.98	1.83	2.01	2.19	1.73	2.47
2021	1.98	1.83	2.01	2.19	1.74	2.46
2022	1.98	1.83	2.01	2.18	1.74	2.45
2023	1.98	1.83	2.00	2.18	1.74	2.44
2024	1.97	1.83	2.00	2.17	1.74	2.43
2025	1.97	1.83	2.00	2.17	1.74	2.43
2026	1.97	1.83	2.00	2.16	1.74	2.42
2027	1.97	1.83	1.99	2.16	1.74	2.41
2028	1.97	1.83	1.99	2.15	1.74	2.40
2029	1.97	1.83	1.99	2.15	1.75	2.39
2030	1.96	1.83	1.99	2.15	1.75	2.39
2031	1.96	1.83	1.99	2.14	1.75	2.38
2032	1.96	1.83	1.98	2.14	1.75	2.37
2033	1.96	1.83	1.98	2.13	1.75	2.36
2034	1.96	1.83	1.98	2.13	1.75	2.36
2035	1.95	1.83	1.98	2.12	1.75	2.35
2036	1.95	1.83	1.97	2.12	1.75	2.34
2037	1.95	1.83	1.97	2.11	1.76	2.33
2038	1.95	1.83	1.97	2.11	1.76	2.32
2039	1.95	1.83	1.97	2.11	1.76	2.32
2040	1.94	1.83	1.97	2.10	1.76	2.31
2041	1.94	1.83	1.96	2.10	1.76	2.30
2042	1.94	1.83	1.96	2.09	1.76	2.29
2043	1.94	1.83	1.96	2.09	1.76	2.28
2044	1.94	1.83	1.96	2.08	1.76	2.28
2045	1.94	1.83	1.95	2.08	1.77	2.27
2046	1.93	1.83	1.95	2.07	1.77	2.26
2047	1.93	1.83	1.95	2.07	1.77	2.25
2048	1.93	1.83	1.95	2.07	1.77	2.24
2049	1.93	1.83	1.95	2.06	1.77	2.24
2050	1.93	1.83	1.94	2.06	1.77	2.23
2051	1.92	1.83	1.94	2.05	1.77	2.22
2052	1.92	1.83	1.94	2.05	1.77	2.21
2053	1.92	1.83	1.94	2.04	1.78	2.21
2054	1.92	1.83	1.93	2.04	1.78	2.20
2055	1.92	1.83	1.93	2.03	1.78	2.19
2056	1.92	1.83	1.93	2.03	1.78	2.18
2057	1.91	1.83	1.93	2.02	1.78	2.17
2058	1.91	1.83	1.93	2.02	1.78	2.17
2059	1.91	1.83	1.92	2.02	1.78	2.16
2060	1.91	1.83	1.92	2.01	1.78	2.15
Source: U.S. Census Bureau, Population Division.						

Figure 1. Age-Specific Fertility Rates by Race and Hispanic Origin: 2009



AIAN=American Indian and Alaska Native; API=Asian and Pacific Islander
Source: U.S. Census Bureau, Population Division.

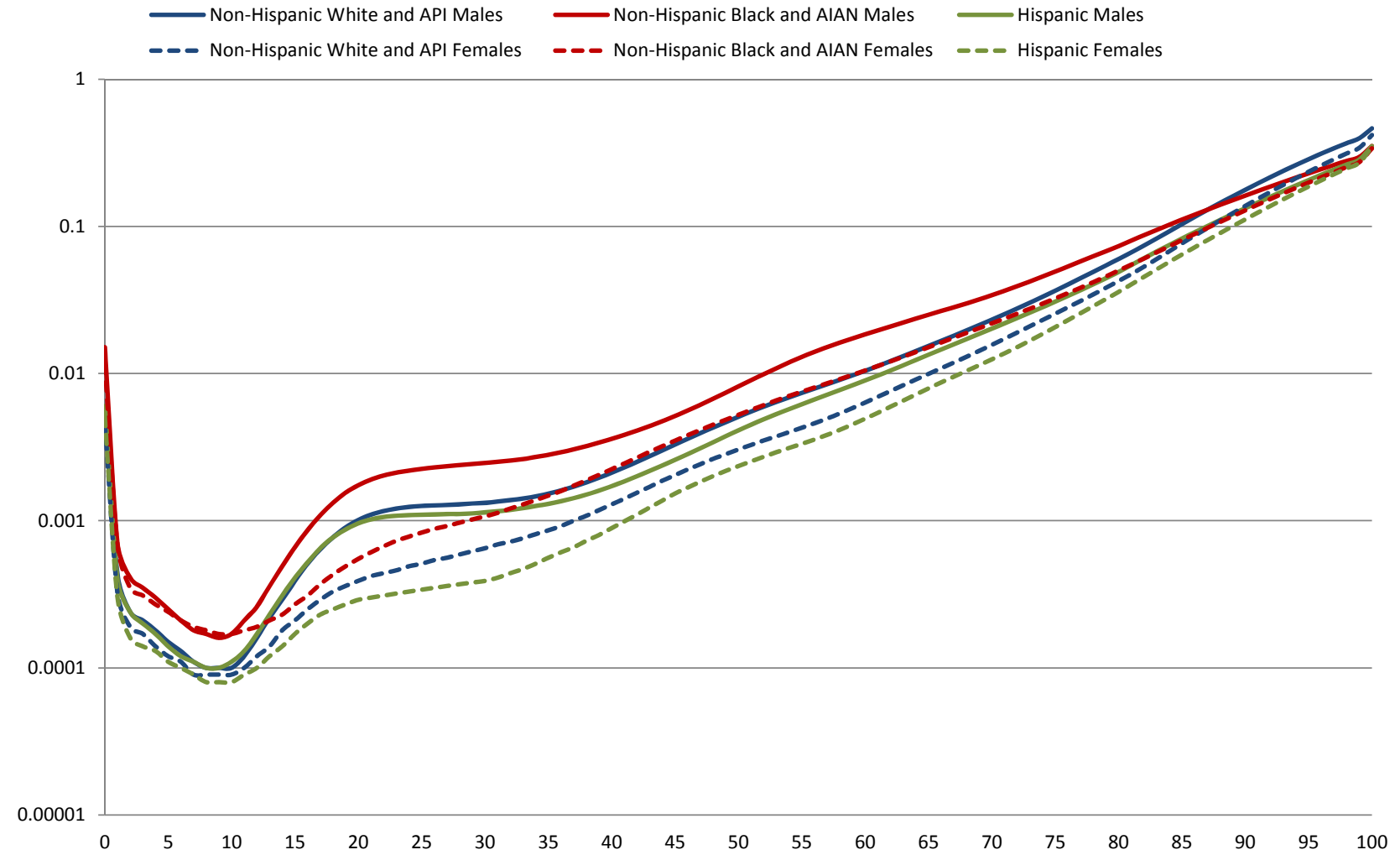
Figure 2. Age-Specific Fertility Rates by Race and Hispanic Origin: 2060



AIAN=American Indian and Alaska Native; API=Asian and Pacific Islander
Source: U.S. Census Bureau, Population Division.

Table 2. Life Expectancy at Birth and Age 65 by Sex, Race, and Hispanic Origin: 2010 to 2060												
Year	Life Expectancy at Birth						Life Expectancy at Age 65					
	Male			Female			Male			Female		
	Non-Hispanic White and API	Non-Hispanic Black and AIAN	Hispanic	Non-Hispanic White and API	Non-Hispanic Black and AIAN	Hispanic	Non-Hispanic White and API	Non-Hispanic Black and AIAN	Hispanic	Non-Hispanic White and API	Non-Hispanic Black and AIAN	Hispanic
2010	76.8	71.2	78.8	81.5	77.6	83.7	18.0	16.1	19.5	20.6	19.3	22.1
2020	78.4	73.5	79.5	82.8	79.3	84.0	18.7	16.9	19.6	21.3	20.1	22.2
2030	79.9	75.6	80.2	84.1	80.8	84.4	19.3	17.7	19.6	22.1	20.9	22.4
2040	81.1	77.4	81.1	85.2	82.2	85.2	20.0	18.5	20.0	22.8	21.6	22.8
2050	82.2	79.0	82.2	86.2	83.5	86.2	20.6	19.2	20.6	23.5	22.3	23.5
2060	83.2	80.4	83.2	87.2	84.7	87.2	21.1	19.8	21.1	24.2	23.0	24.2
AIAN=American Indian and Alaska Native; API=Asian and Pacific Islander												
Source: U.S. Census Bureau, Population Division.												

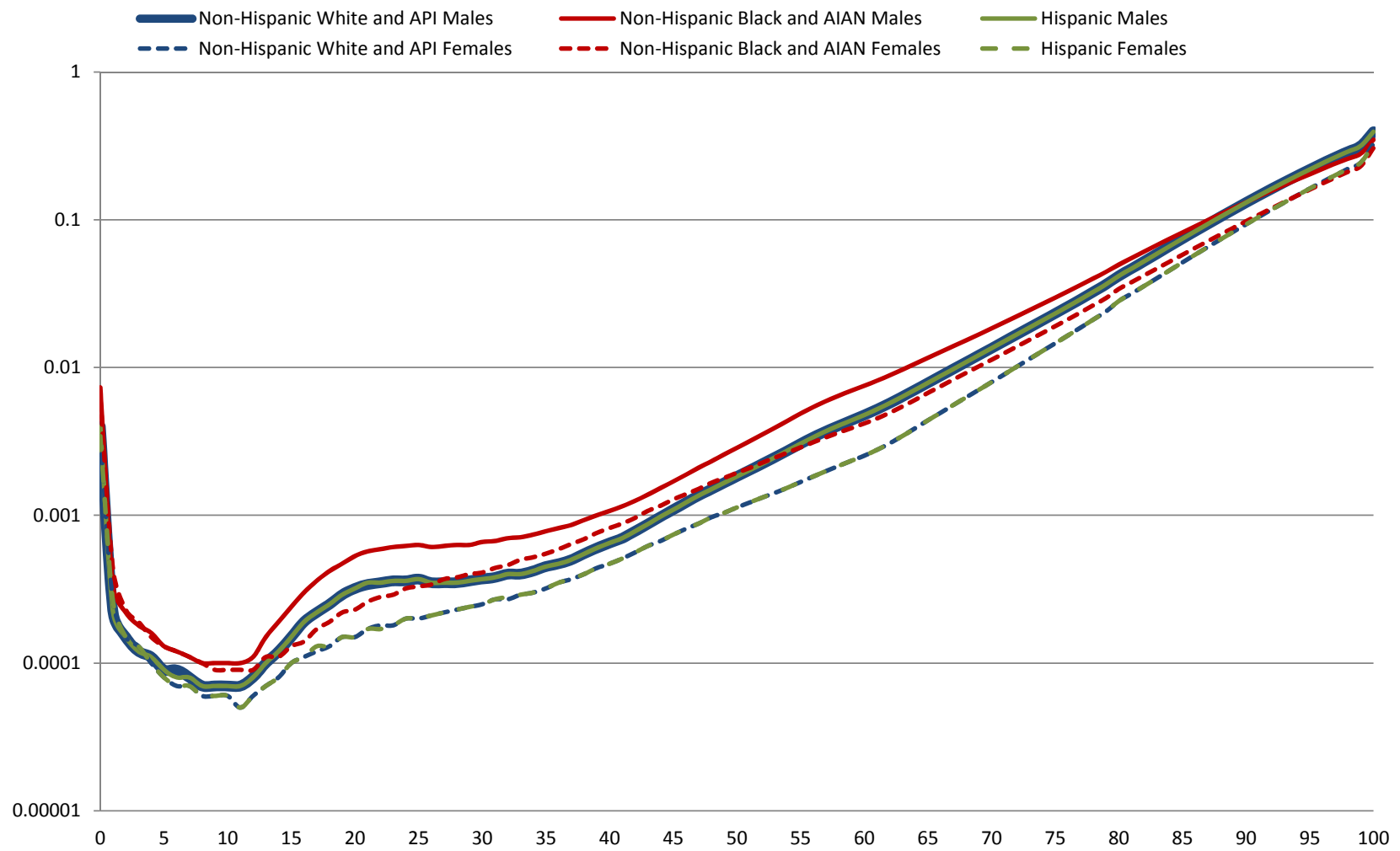
Figure 3. Mortality Rates by Age, Sex, Race, and Hispanic Origin: 2009



AIAN=American Indian and Alaska Native; API=Asian and Pacific Islander

Source: U.S. Census Bureau, Population Division.

Figure 4. Mortality Rates by Age, Sex, Race, and Hispanic Origin: 2060

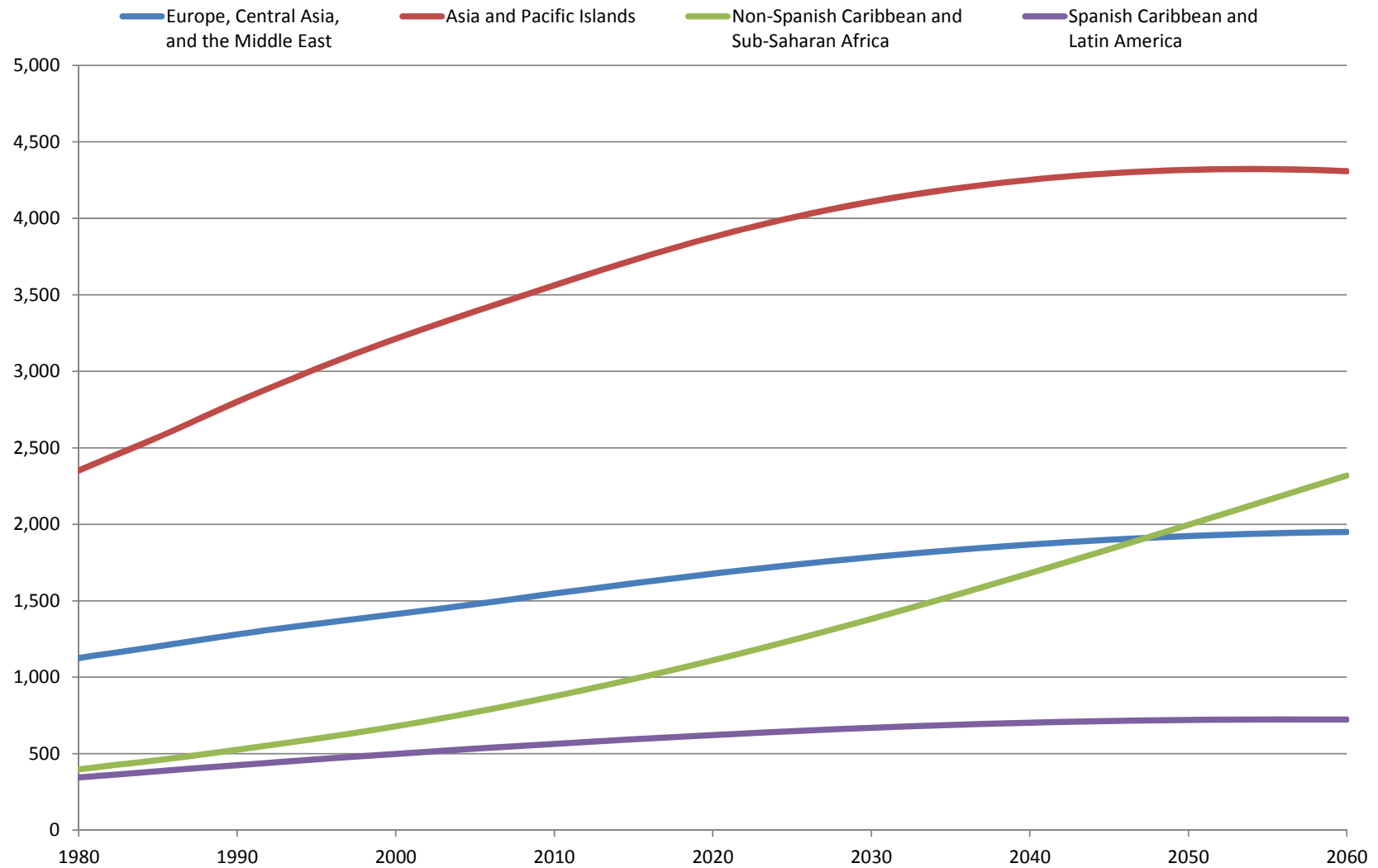


AIAN=American Indian and Alaska Native; API=Asian and Pacific Islander

Source: U.S. Census Bureau, Population Division.

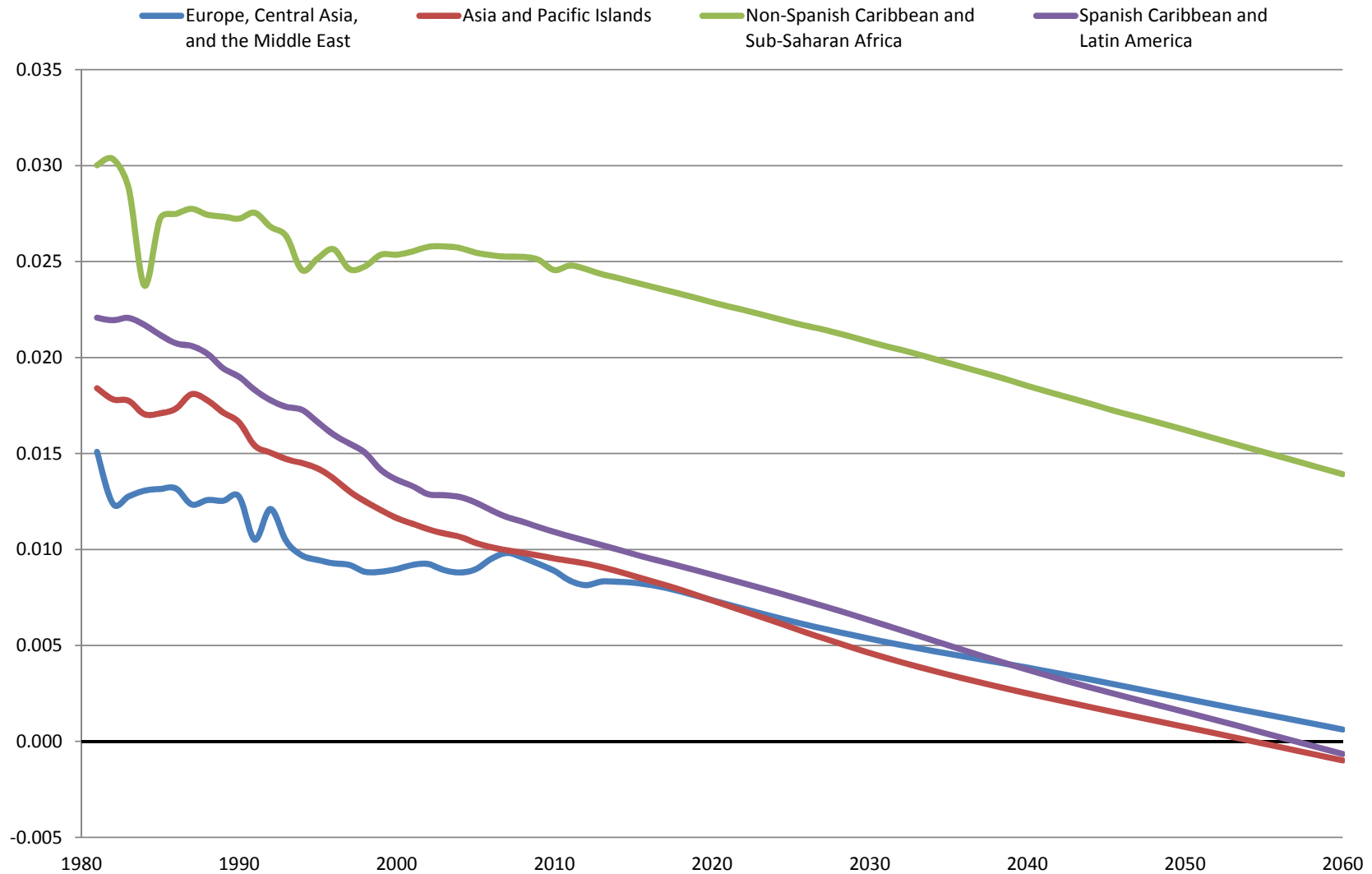
Table 3. Distribution of Foreign-Born Immigrants by Country of Birth Grouping, Race, and Hispanic Origin: 2006-2010					
Race and Hispanic Origin	Total	Europe, Central Asia, and the Middle East	Asia and Pacific Islands	Non-Spanish Caribbean and Sub-Saharan Africa	Spanish Caribbean and Latin America
Total	100.0	100.0	100.0	100.0	100.0
Non-Hispanic	66.5	97.5	99.8	99.1	6.5
White alone	23.2	88.7	2.1	5.7	4.9
Black alone	7.6	1.4	0.3	90.7	0.9
AIAN alone	-	0.1	-	0.1	-
Asian alone	34.5	5.7	95.6	1.9	0.5
NHPI alone	0.4	0.1	1.0	0.1	-
Two or More Races	0.7	1.5	0.7	0.6	0.2
Hispanic	33.5	2.5	0.2	0.9	93.5
White alone	31.2	2.4	-	0.2	87.3
Black alone	1.0	0.1	-	0.5	2.6
AIAN alone	0.6	-	-	-	1.8
Asian alone	0.2	-	0.2	-	0.3
NHPI alone	-	-	-	-	0.1
Two or More Races	0.5	-	-	0.1	1.4
- Rounds to 0.0.					
AIAN=American Indian and Alaska Native; NHPI=Native Hawaiian and Other Pacific Islander					
Source: U.S. Census Bureau, Population Division, <i>American Community Survey</i> , 2006-2010.					

Figure 5. Estimates and Projections of Population in Sending Countries: 1980 to 2060
(In millions)



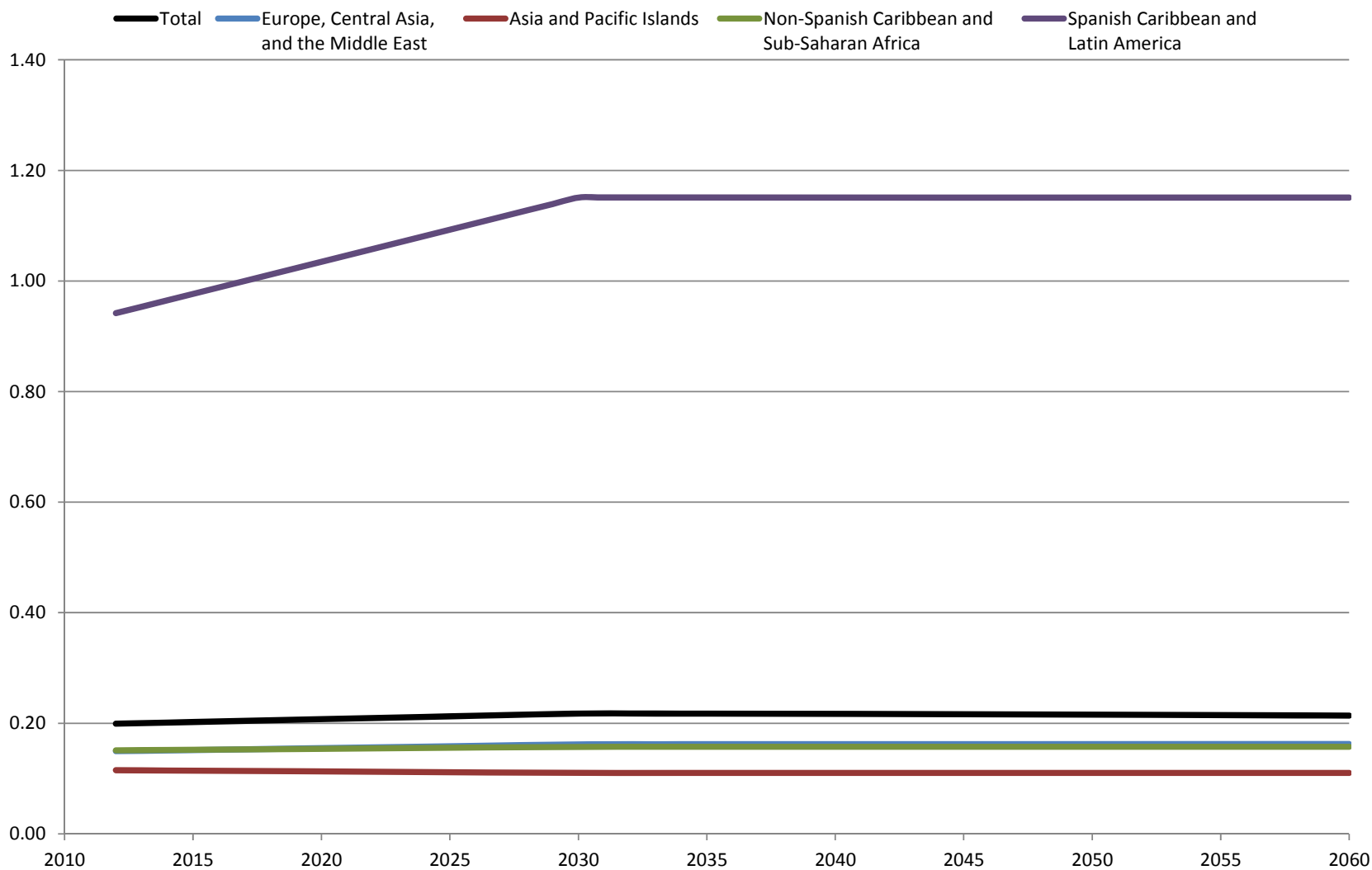
Source: U.S. Census Bureau, Population Division, *International Data Base*, 2012b.

Figure 6. Estimated and Projected Exponential Growth Rate of Population within Sending Countries: 1980 to 2060 (Percent)



Source: U.S. Census Bureau, Population Division, *International Data Base*, 2012b.

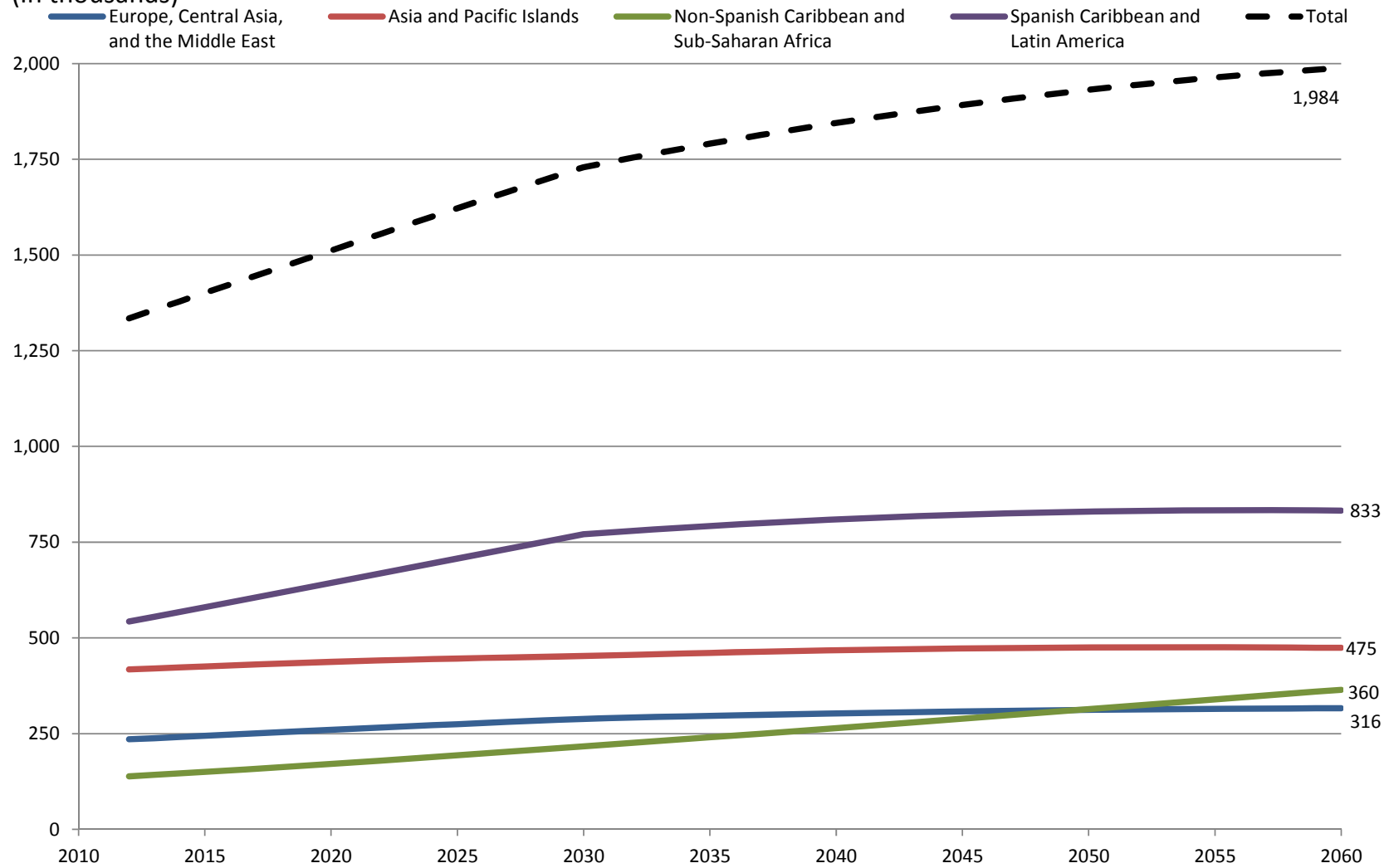
Figure 7. Projected Rates of Emigration from Sending Countries to the United States: 2012 to 2060
(Migrants per 1,000 population)



Source: U.S. Census Bureau, Population Division.

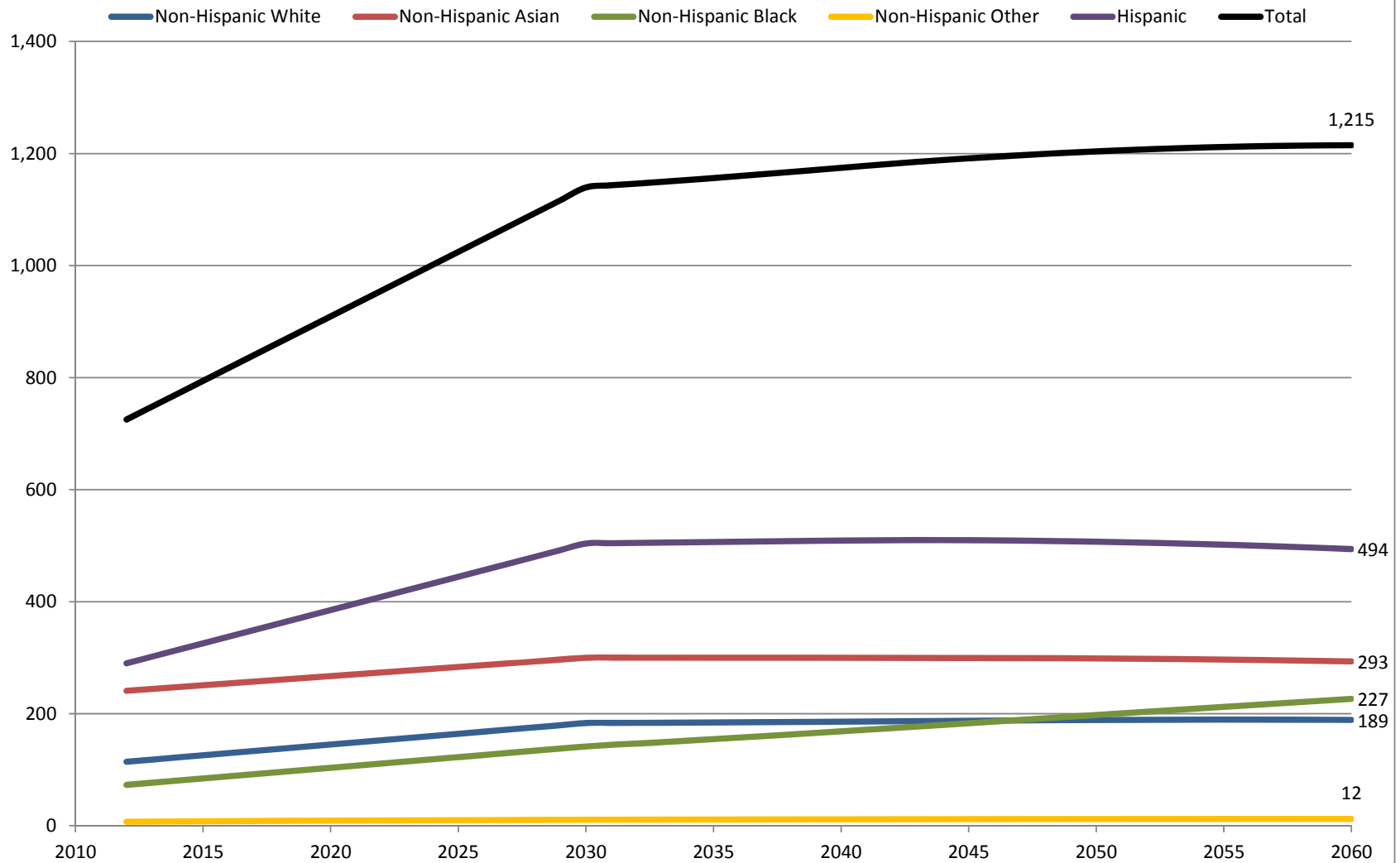
Figure 8. Projections of Foreign-Born Immigration to the United States by Country-of-Birth Groupings: 2012 to 2060

(In thousands)



Source: U.S. Census Bureau, Population Division.

Figure 9. Projections of Net International Migration by Race and Hispanic Origin: 2012 to 2060
(In thousands)



Source: U.S. Census Bureau, Population Division.

Table 4. Distributions and Sex Ratios of Net International Migration by Race and Hispanic Origin: 2012 to 2060																
Year	Total	Non-Hispanic White			Non-Hispanic Black			Non-Hispanic Asian			Non-Hispanic Other			Hispanic		
		Number	Percent	Sex Ratio	Number	Percent	Sex Ratio	Number	Percent	Sex Ratio	Number	Percent	Sex Ratio	Number	Percent	Sex Ratio
2012	725	114	15.7	93.3	73	10.1	88.9	241	33.2	83.7	7	1.0	80.7	290	40.0	134.1
2020	909	145	15.9	91.7	103	11.4	87.9	267	29.4	82.2	9	1.0	82.3	385	42.3	134.9
2030	1,140	183	16.1	90.5	142	12.4	87.2	300	26.3	80.8	11	1.0	83.7	504	44.2	135.4
2040	1,174	186	15.8	89.2	168	14.3	86.4	300	25.5	80.0	11	1.0	83.1	509	43.3	131.3
2050	1,204	189	15.7	88.9	198	16.4	86.0	299	24.8	79.9	12	1.0	83.3	507	42.1	128.2
2060	1,215	189	15.6	88.6	227	18.6	85.7	293	24.1	79.8	12	1.0	83.4	494	40.7	126.5
Note: Numbers are in thousands. Non-Hispanic Other includes Non-Hispanic American Indian and Alaska Native, Non-Hispanic Native Hawaiian and Other Pacific Islander, and Non-Hispanic Two or More Races.																
Source: U.S. Census Bureau, Population Division.																

Table 5. Projections of the Population for the United States by Projection Series: 2012 to 2060			
Year	2012 National Projections	2008 National Projections	Difference (2012 Series - 2008 Series)
2012	314,004	316,266	-2,262
2013	316,439	319,330	-2,891
2014	318,892	322,423	-3,531
2015	321,363	325,540	-4,177
2016	323,849	328,678	-4,829
2017	326,348	331,833	-5,485
2018	328,857	335,005	-6,148
2019	331,375	338,190	-6,815
2020	333,896	341,387	-7,491
2021	336,416	344,592	-8,176
2022	338,930	347,803	-8,873
2023	341,436	351,018	-9,582
2024	343,929	354,235	-10,306
2025	346,407	357,452	-11,045
2026	348,867	360,667	-11,800
2027	351,304	363,880	-12,576
2028	353,718	367,090	-13,372
2029	356,107	370,298	-14,191
2030	358,471	373,504	-15,033
2031	360,792	376,708	-15,916
2032	363,070	379,912	-16,842
2033	365,307	383,117	-17,810
2034	367,503	386,323	-18,820
2035	369,662	389,531	-19,869
2036	371,788	392,743	-20,955
2037	373,883	395,961	-22,078
2038	375,950	399,184	-23,234
2039	377,993	402,415	-24,422
2040	380,016	405,655	-25,639
2041	382,021	408,906	-26,885
2042	384,012	412,170	-28,158
2043	385,992	415,448	-29,456
2044	387,965	418,743	-30,778
2045	389,934	422,059	-32,125
2046	391,902	425,395	-33,493
2047	393,869	428,756	-34,887
2048	395,841	432,143	-36,302
2049	397,818	435,560	-37,742
2050	399,803	439,010	-39,207
2051	401,796	(NA)	(X)
2052	403,798	(NA)	(X)
2053	405,811	(NA)	(X)
2054	407,835	(NA)	(X)
2055	409,873	(NA)	(X)
2056	411,923	(NA)	(X)
2057	413,989	(NA)	(X)
2058	416,068	(NA)	(X)
2059	418,161	(NA)	(X)
2060	420,268	(NA)	(X)
(NA)=Not available. (X)=Not applicable.			
Notes: Resident population as of July 1. Numbers in thousands.			
Source: U.S. Census Bureau, Population Division.			

Table 6. Projections of Population Growth for the United States by Projection Series: 2012 to 2060				
Year	Numeric Change		Percent Change	
	2012 National Projections	2008 National Projections	2012 National Projections	2008 National Projections
2012	2,614	3,034	0.84	0.97
2013	2,434	3,065	0.78	0.97
2014	2,454	3,093	0.78	0.97
2015	2,471	3,117	0.77	0.97
2016	2,486	3,138	0.77	0.96
2017	2,499	3,156	0.77	0.96
2018	2,510	3,172	0.77	0.96
2019	2,517	3,185	0.77	0.95
2020	2,521	3,196	0.76	0.95
2021	2,520	3,205	0.75	0.94
2022	2,515	3,211	0.75	0.93
2023	2,506	3,215	0.74	0.92
2024	2,493	3,217	0.73	0.92
2025	2,478	3,217	0.72	0.91
2026	2,459	3,215	0.71	0.90
2027	2,438	3,213	0.70	0.89
2028	2,414	3,210	0.69	0.88
2029	2,389	3,208	0.68	0.87
2030	2,364	3,206	0.66	0.87
2031	2,321	3,204	0.65	0.86
2032	2,278	3,204	0.63	0.85
2033	2,237	3,204	0.62	0.84
2034	2,197	3,206	0.60	0.84
2035	2,159	3,209	0.59	0.83
2036	2,126	3,212	0.58	0.82
2037	2,095	3,217	0.56	0.82
2038	2,067	3,223	0.55	0.81
2039	2,043	3,231	0.54	0.81
2040	2,022	3,240	0.53	0.81
2041	2,005	3,251	0.53	0.80
2042	1,991	3,264	0.52	0.80
2043	1,980	3,278	0.52	0.80
2044	1,973	3,295	0.51	0.79
2045	1,969	3,315	0.51	0.79
2046	1,968	3,337	0.50	0.79
2047	1,967	3,360	0.50	0.79
2048	1,971	3,387	0.50	0.79
2049	1,977	3,417	0.50	0.79
2050	1,985	3,450	0.50	0.79
2051	1,993	(X)	0.50	(X)
2052	2,002	(X)	0.50	(X)
2053	2,013	(X)	0.50	(X)
2054	2,024	(X)	0.50	(X)
2055	2,037	(X)	0.50	(X)
2056	2,051	(X)	0.50	(X)
2057	2,065	(X)	0.50	(X)
2058	2,079	(X)	0.50	(X)
2059	2,093	(X)	0.50	(X)
2060	2,106	(X)	0.50	(X)
(X)=Not applicable.				
Note: Numbers in thousands. Year refers to the year beginning July 1 of the preceding year and ending June 30 of the indicated year.				
Source: U.S. Census Bureau, Population Division.				

Table 7. Projections of Births and Deaths for the United States by Projection Series: 2012 to 2060						
Period	Births			Deaths		
	2012 National Projections	2008 National Projections	Difference (2012 Series - 2008 Series)	2012 National Projections	2008 National Projections	Difference (2012 Series - 2008 Series)
2012	4,210	4,351	-141	2,522	2,636	-114
2013	4,239	4,388	-149	2,553	2,662	-109
2014	4,266	4,423	-157	2,583	2,688	-105
2015	4,290	4,455	-165	2,613	2,715	-102
2016	4,312	4,484	-172	2,643	2,743	-100
2017	4,333	4,512	-179	2,673	2,772	-99
2018	4,351	4,539	-188	2,704	2,802	-98
2019	4,367	4,565	-198	2,736	2,834	-98
2020	4,380	4,590	-210	2,768	2,867	-99
2021	4,390	4,615	-225	2,803	2,902	-99
2022	4,398	4,639	-241	2,839	2,939	-100
2023	4,404	4,663	-259	2,877	2,978	-101
2024	4,409	4,687	-278	2,917	3,020	-103
2025	4,413	4,712	-299	2,959	3,064	-105
2026	4,416	4,738	-322	3,004	3,110	-106
2027	4,419	4,765	-346	3,052	3,158	-106
2028	4,422	4,794	-372	3,102	3,209	-107
2029	4,426	4,825	-399	3,154	3,262	-108
2030	4,433	4,858	-425	3,208	3,316	-108
2031	4,443	4,893	-450	3,265	3,372	-107
2032	4,456	4,931	-475	3,324	3,429	-105
2033	4,470	4,970	-500	3,383	3,487	-104
2034	4,487	5,011	-524	3,443	3,545	-102
2035	4,505	5,052	-547	3,503	3,604	-101
2036	4,525	5,095	-570	3,559	3,661	-102
2037	4,545	5,138	-593	3,613	3,718	-105
2038	4,567	5,180	-613	3,666	3,774	-108
2039	4,589	5,223	-634	3,717	3,828	-111
2040	4,612	5,265	-653	3,765	3,881	-116
2041	4,636	5,307	-671	3,809	3,931	-122
2042	4,660	5,348	-688	3,851	3,978	-127
2043	4,684	5,388	-704	3,889	4,023	-134
2044	4,707	5,428	-721	3,922	4,064	-142
2045	4,729	5,467	-738	3,951	4,103	-152
2046	4,750	5,505	-755	3,976	4,138	-162
2047	4,769	5,542	-773	3,999	4,171	-172
2048	4,788	5,579	-791	4,016	4,201	-185
2049	4,804	5,616	-812	4,029	4,226	-197
2050	4,820	5,653	-833	4,038	4,249	-211
2051	4,834	(NA)	(X)	4,047	(NA)	(X)
2052	4,846	(NA)	(X)	4,052	(NA)	(X)
2053	4,858	(NA)	(X)	4,055	(NA)	(X)
2054	4,869	(NA)	(X)	4,055	(NA)	(X)
2055	4,879	(NA)	(X)	4,054	(NA)	(X)
2056	4,889	(NA)	(X)	4,051	(NA)	(X)
2057	4,899	(NA)	(X)	4,048	(NA)	(X)
2058	4,909	(NA)	(X)	4,044	(NA)	(X)
2059	4,920	(NA)	(X)	4,041	(NA)	(X)
2060	4,930	(NA)	(X)	4,039	(NA)	(X)
(NA)=Not available. (X)=Not applicable.						
Note: Numbers in thousands. Period refers to the year beginning July 1 of the preceding year and ending June 30 of the indicated year.						
Source: U.S. Census Bureau, Population Division.						

Table 8. Projections of Natural Increase and Net International Migration for the United States by Projection Series: 2012 to 2060

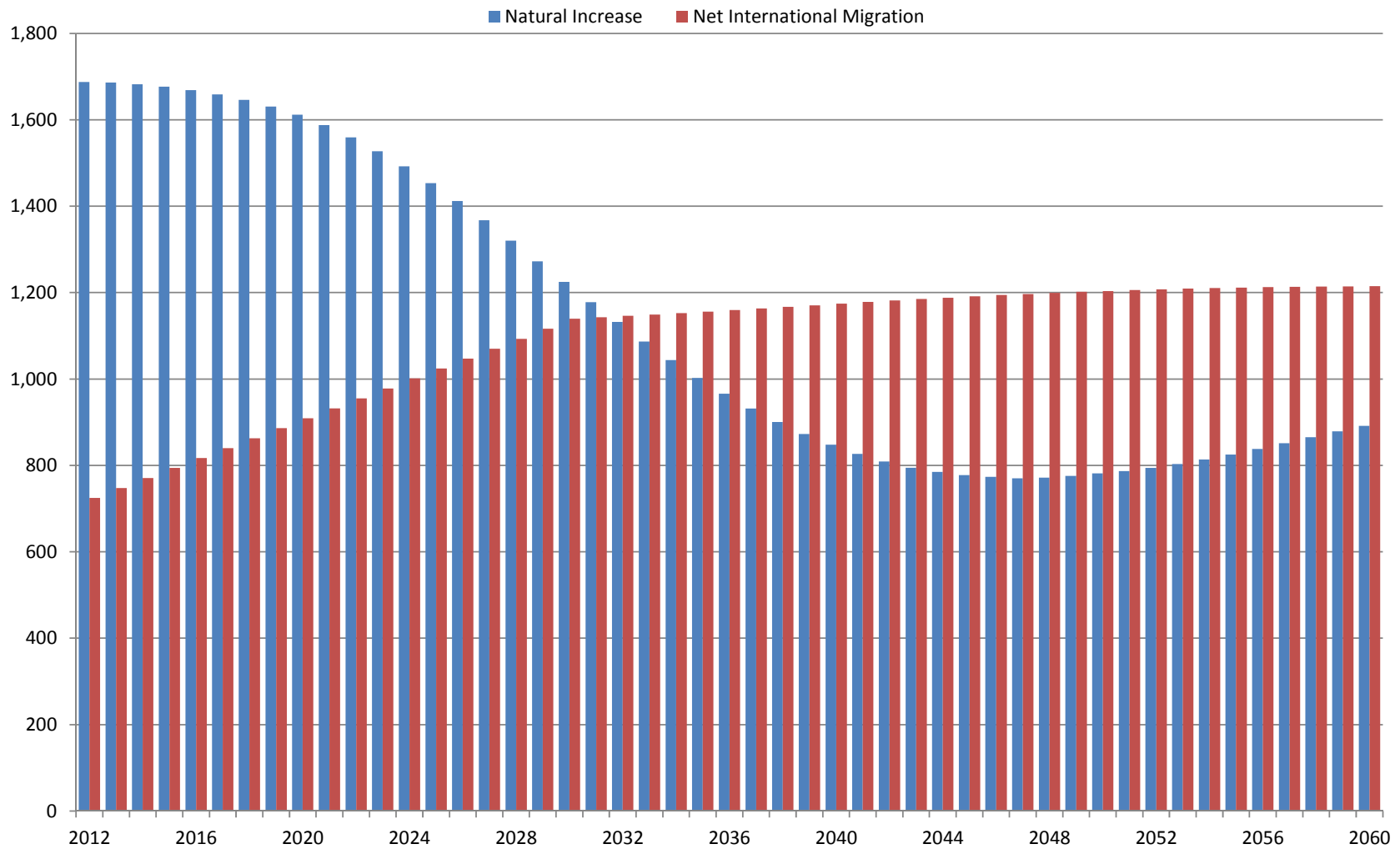
Period	Natural Increase			Net International Migration		
	2012 National Projections	2008 National Projections	Difference (2012 Series - 2008 Series)	2012 National Projections	2008 National Projections	Difference (2012 Series - 2008 Series)
2012	1,688	1,715	-27	725	1,319	-594
2013	1,686	1,726	-40	748	1,338	-590
2014	1,683	1,735	-52	771	1,358	-587
2015	1,677	1,740	-63	794	1,377	-583
2016	1,669	1,741	-72	817	1,396	-579
2017	1,659	1,740	-81	840	1,415	-575
2018	1,647	1,737	-90	863	1,434	-571
2019	1,631	1,731	-100	886	1,454	-568
2020	1,612	1,723	-111	909	1,473	-564
2021	1,588	1,713	-125	932	1,492	-560
2022	1,559	1,700	-141	955	1,511	-556
2023	1,527	1,685	-158	978	1,530	-552
2024	1,492	1,667	-175	1,001	1,549	-548
2025	1,453	1,648	-195	1,024	1,569	-545
2026	1,412	1,628	-216	1,047	1,588	-541
2027	1,367	1,607	-240	1,070	1,607	-537
2028	1,320	1,585	-265	1,093	1,626	-533
2029	1,272	1,563	-291	1,116	1,645	-529
2030	1,225	1,542	-317	1,139	1,664	-525
2031	1,178	1,521	-343	1,143	1,683	-540
2032	1,132	1,502	-370	1,146	1,702	-556
2033	1,087	1,483	-396	1,149	1,722	-573
2034	1,044	1,466	-422	1,153	1,741	-588
2035	1,002	1,448	-446	1,156	1,760	-604
2036	966	1,434	-468	1,160	1,779	-619
2037	932	1,420	-488	1,163	1,798	-635
2038	900	1,406	-506	1,167	1,817	-650
2039	873	1,395	-522	1,171	1,836	-665
2040	848	1,384	-536	1,174	1,855	-681
2041	827	1,376	-549	1,178	1,875	-697
2042	809	1,370	-561	1,182	1,894	-712
2043	795	1,365	-570	1,185	1,913	-728
2044	785	1,364	-579	1,188	1,932	-744
2045	778	1,364	-586	1,191	1,951	-760
2046	774	1,367	-593	1,194	1,970	-776
2047	770	1,371	-601	1,197	1,989	-792
2048	772	1,378	-606	1,199	2,008	-809
2049	776	1,390	-614	1,202	2,028	-826
2050	781	1,404	-623	1,204	2,047	-843
2051	787	(NA)	(X)	1,206	(NA)	(X)
2052	794	(NA)	(X)	1,208	(NA)	(X)
2053	804	(NA)	(X)	1,209	(NA)	(X)
2054	814	(NA)	(X)	1,211	(NA)	(X)
2055	825	(NA)	(X)	1,212	(NA)	(X)
2056	838	(NA)	(X)	1,213	(NA)	(X)
2057	852	(NA)	(X)	1,214	(NA)	(X)
2058	865	(NA)	(X)	1,214	(NA)	(X)
2059	879	(NA)	(X)	1,215	(NA)	(X)
2060	891	(NA)	(X)	1,215	(NA)	(X)

(NA)=Not available. (X)=Not applicable.

Note: Numbers in thousands. Period refers to the year beginning July 1 of the preceding year and ending June 30 of the indicated year.

Source: U.S. Census Bureau, Population Division.

Figure 10. Projections of Natural Increase and Net International Migration: 2012 to 2060
(In thousands)



Source: U.S. Census Bureau, Population Division.

Table 9. Projections of the Percent Non-Hispanic White Alone for the United States by Projection Series: 2012 to 2060

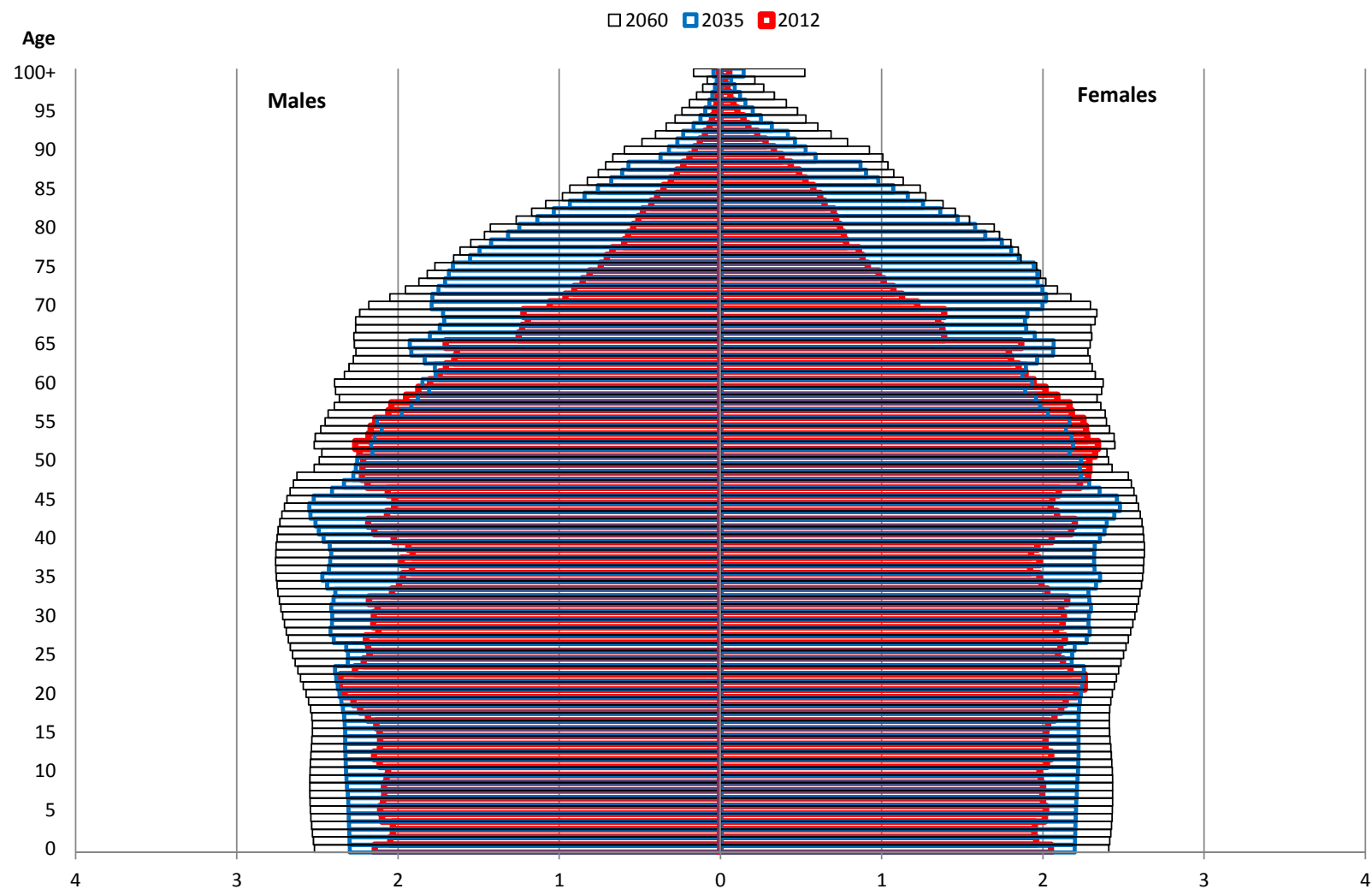
Year	2012 National Projections	2008 National Projections	Difference (2012 Series - 2008 Series)
2012	63.0	63.8	-0.8
2013	62.6	63.3	-0.8
2014	62.2	62.9	-0.7
2015	61.8	62.4	-0.7
2016	61.3	62.0	-0.6
2017	60.9	61.5	-0.6
2018	60.5	61.0	-0.5
2019	60.1	60.6	-0.5
2020	59.7	60.1	-0.4
2021	59.3	59.7	-0.4
2022	58.9	59.2	-0.3
2023	58.4	58.7	-0.3
2024	58.0	58.3	-0.3
2025	57.6	57.8	-0.2
2026	57.2	57.4	-0.2
2027	56.8	56.9	-0.1
2028	56.3	56.4	-0.1
2029	55.9	55.9	-0.1
2030	55.5	55.5	0.0
2031	55.0	55.0	0.0
2032	54.6	54.5	0.0
2033	54.1	54.1	0.1
2034	53.7	53.6	0.1
2035	53.3	53.1	0.1
2036	52.8	52.7	0.2
2037	52.4	52.2	0.2
2038	51.9	51.7	0.2
2039	51.5	51.3	0.2
2040	51.0	50.8	0.2
2041	50.6	50.3	0.2
2042	50.1	49.9	0.2
2043	49.7	49.4	0.3
2044	49.2	49.0	0.3
2045	48.8	48.5	0.3
2046	48.3	48.1	0.3
2047	47.9	47.6	0.3
2048	47.5	47.2	0.3
2049	47.0	46.8	0.3
2050	46.6	46.3	0.3
2051	46.2	(NA)	(X)
2052	45.8	(NA)	(X)
2053	45.3	(NA)	(X)
2054	44.9	(NA)	(X)
2055	44.5	(NA)	(X)
2056	44.1	(NA)	(X)
2057	43.7	(NA)	(X)
2058	43.3	(NA)	(X)
2059	43.0	(NA)	(X)
2060	42.6	(NA)	(X)

(NA)=Not available. (X)=Not applicable.

Note: Numbers in thousands.

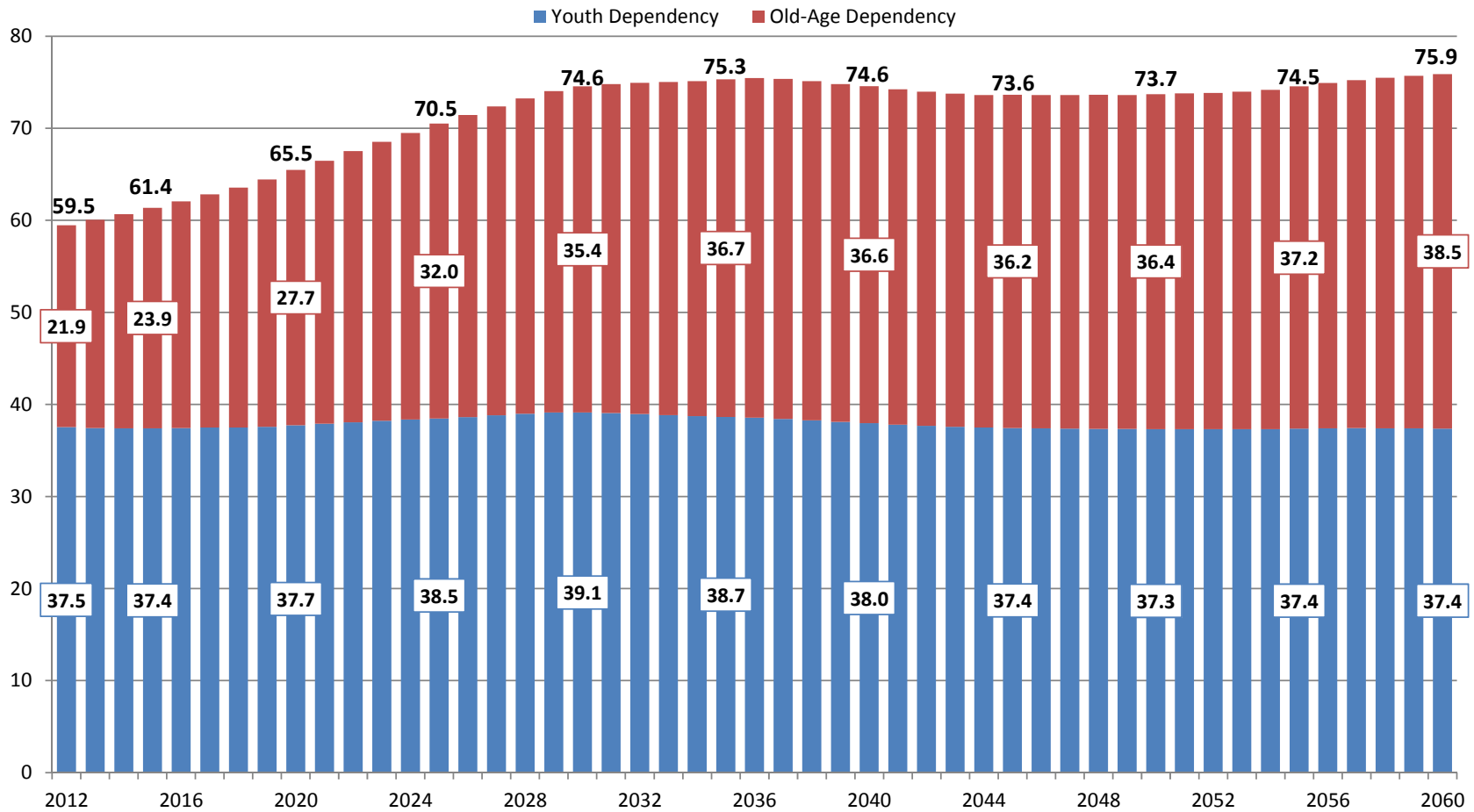
Source: U.S. Census Bureau, Population Division.

Figure 11. Projected Population by Age and Sex: 2012 to 2060
(In millions)



Source: U.S. Census Bureau, Population Division.

Figure 12. Projected Dependency Ratios: 2012 to 2060



Note:

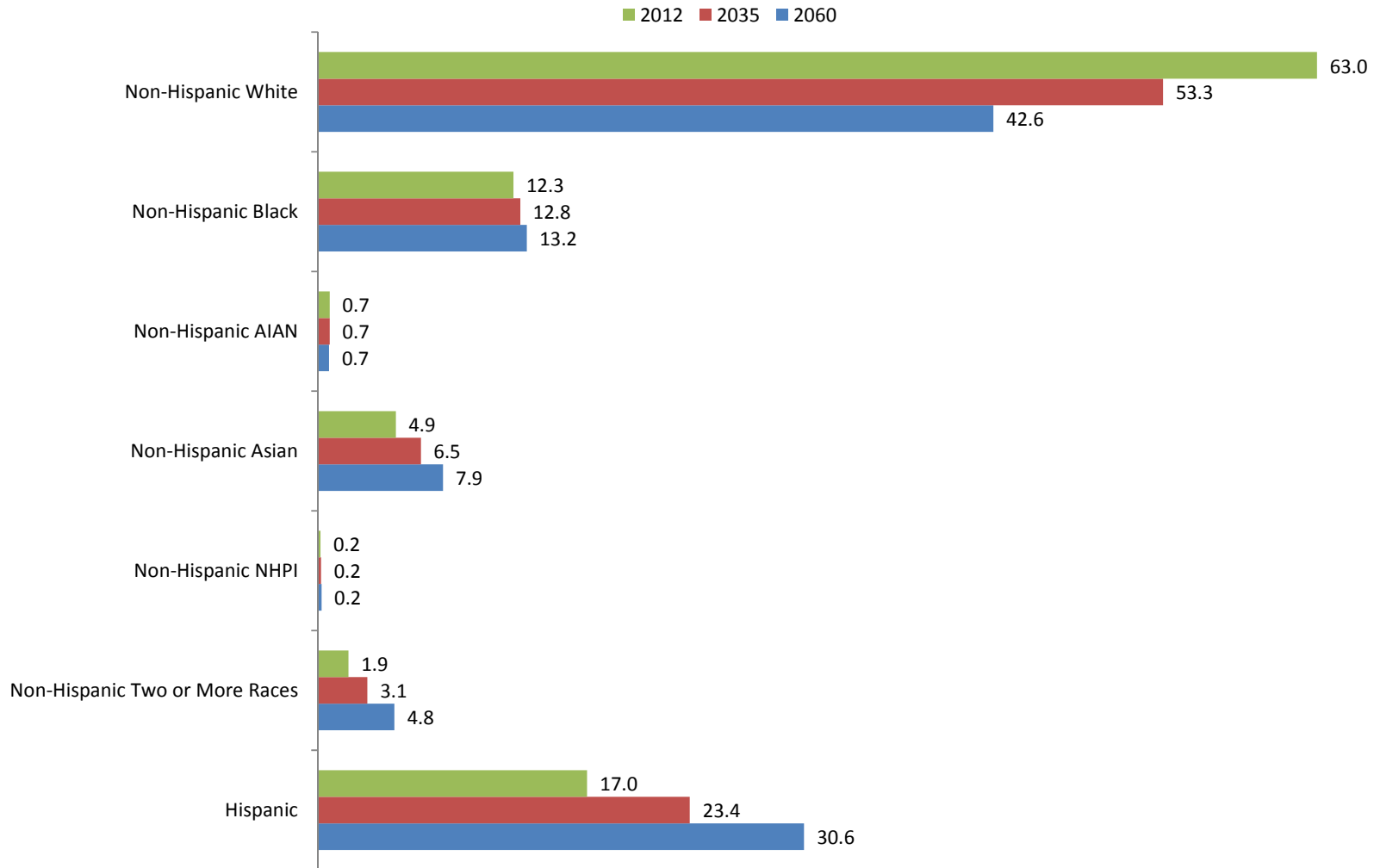
Total dependency = ((Population under age 18 + Population aged 65 years and over) / (Population aged 18 to 64 years)) * 100.

Old-age dependency = (Population aged 65 years and over / Population aged 18 to 64 years) * 100.

Youth dependency = (Population under age 18 / Population aged 18 to 64 years) * 100.

Source: U.S. Census Bureau, Population Division.

Figure 13. Projected Distribution of Resident Population by Race and Hispanic Origin: 2012 to 2060
(Percent)



AIAN=American Indian and Alaska Native; NHPI=Native Hawaiian and Other Pacific Islander
Source: U.S. Census Bureau, Population Division.